

CLAIMS

1. A layered filter structure, said filter element comprising
 - a first layer, said first layer comprising a porous metal layer;
 - 5 - a second layer, said second layer comprising a self-supporting layer of sintered short metal fibers;
said first layer and said second layer being sintered together.
- 10 2. A layered filter structure according to claim 1, whereby said second layer has a maximum roughness depth defined by the R_t value of less than three times the equivalent diameter of a short metal fiber of said second layer, said R_t value being measured over a length equal to the thickness of said second layer.
- 15 3. A layered filter structure according to claim 1 or 2, whereby said short metal fibers of said second layer are three-dimensionally orientated.
- 20 4. A layered filter structure according to any one of the preceding claims, whereby said first layer is sintered.
- 25 5. A layered filter structure according to any one of the preceding claims, whereby said first layer comprises a non-woven metal fiber fleece comprising long metal fibers.
- 30 6. A layered filter structure according to any one of the preceding claims, whereby said first layer comprises metal powder particles.
7. A layered filter structure according to any one of the preceding claims, whereby said first layer comprises short metal fibers.
8. A layered filter structure according to any one of the preceding claims, whereby said first layer is supported by a reinforcing structure.

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9. A layered filter structure according to any one of the preceding claims, whereby said second layer further comprises long metal fibers and/or metal powder particles.
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10. A layered filter structure according to any one of the preceding claims, whereby said second layer comprises between 20 and 80 % short metal fibers and/or metal powder particles and between 20 and 80 % long metal fibers.
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11. A layered filter structure according to any one of the preceding claims, whereby said first layer has a porosity ranging between 50 and 85 %.
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12. A layered filter structure according to any one of the preceding claims, whereby said second layer has a porosity ranging between 50 and 85 %.
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13. A method of manufacturing a layered filter structure, said method comprising the steps of :
- providing a first layer, said first layer comprising a porous metal layer;
 - providing a second layer, said second layer comprising a self-supporting layer of short metal fibers which are sintered together;
 - 30 - bringing said first layer and said second layer in contact with each other to form a layered structure;
 - sintering said layered structure.
14. The use of a layered filter structure according to any one of claims 1 to 12 as surface filtration medium.
15. The use according to claim 14 for the filtration of liquids or gases.